

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) An ultrasonic standing-wave atomizer arrangement ~~(10, 20)~~ for producing a paint spray mist for painting a workpiece, with a sonotrode ~~(12, 22)~~, with a component ~~(14, 24)~~ arranged lying opposite the sonotrode ~~(12, 22)~~, a standing ultrasonic field being formed in the intermediate space between the at least one sonotrode ~~(12, 22)~~ and the component ~~(14, 24)~~ in the case of operation, and also with at least one nozzle-shaped paint feeding device ~~(18)~~, which is arranged perpendicularly in relation to the center axis of the sonotrode ~~(12, 22)~~ and introduces the paint into the intermediate space for the atomizing process at at least one paint discharge point, ~~characterized in that~~ wherein the component arranged lying opposite the sonotrode ~~(22)~~ is a coaxially aligned reflector ~~(24)~~, ~~in that~~ wherein the end face ~~(26)~~ of the latter, facing the sonotrode ~~(22)~~, has a step-shaped recessed formation ~~(28)~~ and ~~in that~~ wherein the depth of the recessed formation ~~(28)~~ corresponds to a multiple of half the wavelength λ of the sonic vibrations in air that are produced in the sonotrode ~~(22)~~.
2. (Currently Amended) The ultrasonic standing-wave atomizer arrangement as claimed in claim 1, ~~characterized in that~~ wherein the reflector ~~(24)~~ is formed as a passive reflector.

3. (Currently Amended) The ultrasonic standing-wave atomizer arrangement as claimed in claim 2, ~~characterized in that~~ wherein the reflector (24) is formed as a circular disk-shaped plate or as a rectangular plate.

4. (Currently Amended) The ultrasonic standing-wave atomizer arrangement as claimed in claim 3, ~~characterized in that~~ wherein the thickness of the reflector (24) likewise corresponds to a multiple of half the wavelength of the sonic vibrations produced in the sonotrode.

5. (Currently Amended) The ultrasonic standing-wave atomizer arrangement as claimed in claim 3 ~~or 4~~, ~~characterized in that~~ wherein the thickness of the reflector is at least 10 mm.

6. (Currently Amended) The ultrasonic standing-wave atomizer arrangement as claimed in ~~one of claims 1 to 5~~ claim 1, ~~characterized in that~~ wherein the step-shaped recessed formation (28) in the reflector (24) is formed in the latter below the horizontal center axis of the reflector (24).

7. (Currently Amended) The ultrasonic standing-wave atomizer arrangement (10) as claimed in claim 6, ~~characterized in that~~ wherein the step-shaped recessed formation (28) in the reflector (24) is formed in the end face of the reflector (24) lying opposite the sonotrode (22) in the form of a semicircle.

8. (Currently Amended) The ultrasonic standing-wave atomizer arrangement ~~(10)~~ as claimed in claim 6, ~~characterized in that~~ wherein the stepped-shaped recessed formation ~~(28)~~ in the reflector ~~(24)~~ is formed in the end face of the reflector ~~(24)~~ lying opposite the sonotrode in the manner of a sector, with an opening widening symmetrically in the spraying direction.

9. (Currently Amended) The ultrasonic standing-wave atomizer arrangement ~~(10)~~ as claimed in claim 8, ~~characterized in that~~ wherein the sector-like stepped-shaped recessed formation ~~(28)~~ in the end face of the reflector ~~(24)~~ has an angle of opening α of $45^\circ < \alpha < 180^\circ$.

10. (Currently Amended) The ultrasonic standing-wave atomizer arrangement ~~(10)~~ as claimed in claim 9, ~~characterized in that~~ wherein the sector-like step-shaped recessed formation ~~(28)~~ in the end face of the reflector ~~(24)~~ has an angle of opening α of 135° .

11. (New) The ultrasonic standing-wave atomizer arrangement as claimed in claim 4, wherein the thickness of the reflector is at least 10 mm.

12. (New) . The ultrasonic standing-wave atomizer arrangement as claimed in claim 11, wherein the step-shaped recessed formation in the reflector is formed in the latter below the horizontal center axis of the reflector.

13. (New) The ultrasonic standing-wave atomizer arrangement as claimed in claim 12, wherein the step-shaped recessed formation in the reflector is formed in the end face of the reflector lying opposite the sonotrode in the form of a semicircle.

14. (New) The ultrasonic standing-wave atomizer arrangement as claimed in claim 12, wherein the stepped-shaped recessed formation in the reflector is formed in the end face of the reflector lying opposite the sonotrode in the manner of a sector, with an opening widening symmetrically in the spraying direction.

15. (New) The ultrasonic standing-wave atomizer arrangement as claimed in claim 14, wherein the sector-like stepped-shaped recessed formation in the end face of the reflector has an angle of opening α of $45^\circ < \alpha < 180^\circ$.

16. (New) The ultrasonic standing-wave atomizer arrangement as claimed in claim 15, wherein the sector-like step-shaped recessed formation in the end face of the reflector has an angle of opening α of 135° .